DOCUMENT RESUME

ED 372 334 CG 025 636

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TITLE	Facts on Marijuana. Clearinghouse Fact Sheet.
INSTITUTION	Rutgers, The State Univ., Piscataway, NJ. Center of Alcohol Studies.
PUB DATE	90
NOTE	4p.; The New Jersey Alcohol/Drug Abuse Resource Center and Clearinghouse serves institutions of higher education, state agencies, communities, and school districts throughout the state of New Jersey by providing technical assistance, training, and resources in alcohol and other drug abuse education and prevention. Clearinghouse fact sheets may be reproduced for educational use.
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Drug Abuse; Drug Use Testing; Etiology; Illegal Drug Use; *Marijuana; *Pharmacology

ABSTRACT

Marijuana or Cannabis is a weed which grows in many different parts of the world. The plant may be altered into different forms to allow various forms of ingestion. Although marijuana's psychoactive properties have been known for almost 5,000 years, the plant first attracted public attention in the United States during the first half of this century, and then became widely known during the 1960s. Marijuana is commonly smoked, producing a euphoria which lasts approximately two hours. While the drug induces side effects such as enhanced taste, touch, hearing, and vision, it also inhibits memory; accelerates the heart beat; impairs muscular coordination, time, and space judgment; impairs driving abilities; leads to lung disease; promotes birth defects; and may impede the immune system's function. Controversy still surrounds the social and medical consequences of marijuana use and debate continues on whether the drug leads to chromosome damage. Legal penalties for marijuana use vary widely in the states and drug testing has become commonplace. Analytical testing techniques may detect minute levels of marijuana's psychoactive ingredients in bodily fluids but these tests do not necessarily reveal whether the person is intoxicated or how recently marijuana may have been used. (RJM)

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FACTS ON MARIJUANA

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FACTS ON MARIJUANA

John Brick, Ph.D.

Marijuana refers to the plant Cannabis, a wild weed that grows in many different parts of the world. The plant varies in size ranging from several feet to as much as twenty feet in height. Most common varieties have a green, five-fingered leaf with serrated edges that make it easily recognizable. When the mature plant is harvested and dried it can be milled, much like tobacco, and smoked in a pipe or a hand-rolled cigarette known as a joint. Sometimes marijuana is eaten. The dried leaf and plant stem come in various colors ranging from green to reddish-brown to gold. Resins scraped from the plant can be used to make hashish which can also be smoked or eaten (e.g., in "hash" brownies) to produce intoxication. Hashish doesn't resemble plant matter, rather it is marketed in compressed blocks or chunks that vary in color (black, gold, green, brown) and texture (dense, oily, hard, dry/crumbly). Both marijuana and hashish are sold in kilograms, ounces or fractions of an ounce, mostly in $5 and $10 ("nickel" and "dime") amounts.

In the U.S., marijuana first attracted public attention during the first half of the century and became widely known during the 1960's. However, the use of marijuana for its psychoactive properties has been known for nearly 5,000 years. Its earliest known use dates back to China in 2737 B.C. where the plant was used as a homeopathic medication.

The most common route of administration for marijuana or

hashish is through inhalation into the lungs. When smoked, the "high" starts within minutes and lasts for about two hours. However, peak levels in the blood occur about ten minutes after smoking. Sophisticated analytical techniques permit the psychoactive ingredients, such as delta-9-**tetrahydrocannabinol (THC)**, or various metabolites (break-down products), to be detected at very low levels in body fluids. These compounds can be detected in the urine for up to two months after use. Such techniques are qualitative, not quantitative: they are relatively accurate, but do not necessarily reveal that the person is intoxicated or even how recently marijuana may have been used.

Marijuana produces several behavioral and physiological effects. The most common effects of being "stoned" include subjective feelings of relaxation, euphoria, enhanced taste, touch, hearing and vision. Time is often perceived as "slowed down", and great humor is often found in common events. Less desirable effects include a shortened memory span and a false sense of enhanced creativity and communicability. Tachycardia (increased heart rate) of twenty to fifty beats per minute above normal is typical. Muscular coordination and time and space judgement are also impaired. Marijuana may also impair driving abilities. At high doses, anxiety, depression and paranoia may occur, but such psychological changes are not frequent or usual. Panic attacks, particularly among new users, are more common. Other symptoms of intoxication include glassy and bloodshot eyes, puffy eyelids, and the smell of burnt vegetation on the breath, clothing or fingers.

There is now evidence that like tobacco, smoking marijuana can increase the risk of lung diseases, including lung cancer. Evidence is also accummulating to show that, as with other drugs, the use of marijuana during pregnancy may increase the risk for premature delivery, small birth size, and abnormal development of the head and face.

A great deal of controversy still surrounds the social and medical consequences of mariuana use. For example, marijuana has been implicated in producing decreased mo-

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tivation (i.e.,"amotivational syndrome"), chromosomal damage, immune system dysfunction, and changes in the body's level of sex hormones. To date, there is no conclusive scientific evidence that marijuana produces an "amotivational syndrome" that did not already exist or might not have developed in an individual whether the drug was used or not. However, being intoxicated can only detract from learning, skill development and productivity. To the extent that a person finds these abilities and their development motivating to intellectual and personal growth, being intoxicated will interfere with their motiviation. Research on chromosome damage is inconclusive; some studies report damage, some do not. Many studies have shown, however, that marijuana use decreases immune system functioning and the level of male sex hormones. In humans, such changes have not been shown to be clinically significant or permanent, however.

Legal penalties for the use of marijuana and hashish vary considerably from state to state, and range from nominal to hefty fines to suspension of drivers' licenses. Penalties for intent to distribute even small amounts often include mandatory imprisonment.

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